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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,611	08/07/2001	Frank Cornelis Penning	NL000452	1413

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EXAMINER

CHEN, TIANJIE

ART UNIT PAPER NUMBER

2652

DATE MAILED: 10/07/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/923,611

Applicant(s)

PENNING ET AL.

Examiner

Tianjie Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## ***Non-Final Rejection***

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in EP on 08/09/2000. It is noted, however, the copy filed has not been certified. A certified copy of the EP 00202818.1 application should be submitted as required by 35 U.S.C. 119(b).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-7 and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Chapman (IEEE Transaction on Magnetics, V.25, No.5, pp.3686-3688, 1989).

With regard to claims 1 and 5, Chapman shows a method of manufacturing a magnetic head having a head face/a slider having an air bearing surface (ABL in Fig. 1a) and including a magnetic coil (Fig. 1a) which extends parallel to the head face (Introduction, lines 1-4), in which method the magnetic coil is formed at a first side of a first substrate (head element substrate in Figs. 1a-1d), whereafter the first substrate provided with the magnetic coil is adhered with its first side to a side of a second substrate (Footform glass slider wafer in Figs. 1a-1d), whereafter material of the first substrate (head element substrate) is removed from a second side of the first substrate, which second side is turned away from the first side, to form the head face/air bearing face surface (Figs. 1c and 1d, "Process Approach" section, lines 7-16).

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With regard to claim 2, Chapman further shows a substrate of silicon provided with a top layer of an insulating material is used as the first substrate, the top layer being adjacent to the first side ("Experimental Results" section, lines 9-15).

With regard to claim 3, Chapman further shows after a step involving the forming of a layer of a metal A (See the Figures with added numerals attached below) on the first substrate, at least one further step involving the forming of a layer of a non-conducting material B and the forming of a further layer of a metal C and the forming of interconnections D between two neighboring layers E and A of metal is performed to create the magnetic coil.

With regard to claim 4, Chapman further shows that a substrate of a glass material is used as the second substrate ("Experimental Results" section, line 3).

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With regard to claim 6, Chapman further shows on a silicon substrate a top layer of an insulation material is provided in order to form the first substrate, the top layer being adjacent to the first side, wherein a substrate of glass is used as the second substrate, and wherein the silicon substrate is removed after adhering of the first substrate, to the second substrate.

With regard to claim 7, Chapman further shows during forming of the magnetic coil a metallic layer A (See the attached figures above) is formed beside the magnetic coil, which metallic layer is at least partly removed to form a recess during structuring of the face to form the air bearing surface.

With regard to claim 10, Chapman shows a slider manufactured by the method as claimed in the Claims 5.

With regard to claim 11, Chapman further shows a top layer ABL forms a protective layer for the slider.

With regard to claim 12, Chapman shows that the slider as claimed in claim 10 is used for a system for magnetically or magneto-optically recording information into a storage medium.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chapman in view of Crue et al (US 6,452,742).

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Chapman shows a method as described above, further shows that during forming of the magnetic coil an alumina layer is formed beside the magnetic coil in the making.

Chapman does not specify it as a heat sink layer.

Crue et al shows a magnetic head and discloses that alumina layer is a heat sink layer (Column 4, lines 36-39).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to realize that the alumina layer in Chapman's device is a heat sink layer as taught by Crue et al.

4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chapman in view of Wang et al (US 5,978,319).

Chapman shows a method as described above, but does not specify the structure of the coil.

Wang et al shows a horizontal coil for a slider having a stack of interconnected coil layers (Fig. 5) is formed to create the magnetic coil.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to use the stack taught by Wang et al into Chapman's device. The rationale is as follows: Chapman discloses a head with a brief sketch of the coil but does not specify the details of the coil. Chapman teaches a stack of interconnected coil, which has low inductance. The low inductance raises the resonating frequency of the coil assembly, which increases the data recording rate (Column 4, lines 10-16). One of ordinary skill in the art would have been motivated to use the stack of interconnected coil taught by Wang et al in order to obtain high recording rate.

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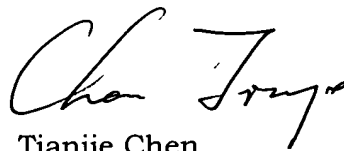
**Conclusion**

5. The prior art made of record in PTO-892 Form and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tianjie Chen whose telephone number is (703) 305-7499. The examiner can normally be reached on 8:00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

A handwritten signature in black ink, appearing to read 'Chen Tianjie'.

Tianjie Chen  
Examiner  
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